

**Lightwave Guide Cable and Process for Carrying an Optical Signal, especially with  
Respect to Multiple Waveguide Techniques**

**Abstract of the Invention**

**[0038]** An optical-waveguide cable which is distinguished by a dispersion that avoids non-linearities in conjunction with a relatively low attenuation comprises at least one first section (a), which has fibres of a first type (H) which are designed as high-level fibre, and at least one second section (b), which has fibres of a second type (N) which are designed as low-level fibre, the fibres of the first type (H) being connected to the fibres of the second type (N) at at least one transition point (U) between the first and second sections (a, b), and the fibres of the first type (H) having a larger mode field diameter and a higher dispersion than the fibres of the second type (N).

**[0039]** Furthermore, a method for transmitting optical signals is proposed, in which the optical signals to be transmitted are coupled into fibres of the first type (H) of a first section (a) of such an optical-waveguide cable and, after a specific transmission path, are fed into fibres of the second type (N) of a second section (b) of the optical-waveguide cable.